Navy NoFoam Unit Commercialized

NFESC Signs Joint Patent License Agreement With Manufacturer

The new NoFoam system used in firefighting equipment testing that was developed by the Naval Facilities Engineering Service Center (NFESC) is now available commercially.

Streamlined technology transfer programs continue to encourage private companies to commercialize technology coming out of the nation's military research centers. JR Thomas International, Inc. of Ventura, California took advantage of the opportunity to license a firefighting equipment test system developed at the nearby NFESC.

Rance Kudo, Jesse McNolty, and Ray Cappillino, members of the NFESC Environmental Quality Division, developed the NoFoam unit, which attaches to fire trucks to replace the foam fluid with a brightly colored surrogate for testing. The green fluid provides visual reassurance and, more importantly, the system monitors the flow rate of the fluid to ensure the correct foam-to-water ratio.

"The solar-powered unit, which can work with any aircraft rescue and firefighting vehicle, mitigates cleanup costs and the cost of foam liquid used in testing. It also builds firefighters' confidence by assuring them the system is working and allowing frequent practice with the equipment," Kudo said.

Tony Thomas, founder of JR Thomas, produces the trailers and the fittings that connect the trucks to the NoFoam test system. Thomas had worked many times with NFESC and appreciated the commercial applications for the NoFoam unit.

Airports like Los Angeles International use the same foam. Some airports have spent millions of dollars on test cleanup facilities.

JR Thomas will manufacture the units and begin marketing to U.S. and Canadian commercial airports.

By mid-February, when Thomas and Captain Richard O. Gamble, Commanding Officer of the NFESC, signed the joint patent license agreement, NoFoam units had been tested on about 75 firefighting vehicles in different branches of the Department of Defense. "Every single vehicle tested had problems," Kudo said. "Many people were not putting enough foam—or surrogate— into the mix."

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Kurt Buehler, Office of Research and Technology Application (ORTA) shakes hands with Tony Thomas of Thomas International, Inc. after signing NoFoam license with the Naval Facilities Engineering Service Center.

Naval engineers Rance Kudo and Ray Cappillino (BACK) are working with Tony Thomas and Captain Richard Gamble (FRONT) on manufacturing and marketing a unit that will allow firefighters to test their equipment in a more environmentally friendly way.

According to the licensing agreement, Thomas paid $2,000 at the outset and will pay per-unit royalties, which go back to the inventors and NFESC.

Kurt Buehler, the Far West Regional Coordinator with the Federal Laboratory Consortium for Technology Transfer, admits, "Every time you deal with the government, there is bound to be some bureaucracy involved." The technology transfer law applies not only to classic laboratories like Lawrence Livermore National Laboratory, but every Navy base, including NFESC, which provides specialized facilities engineering support to the Navy. NFESC has shifted away from more theoretical research and development to more practical problem solving, making its work more commercial-ready. "There's a lot of potential here," Buehler said. "Our job is demonstration and validation, where the rubber meets the road."

NFESC focuses on specialized facilities engineering in five primary areas: ocean facilities, shore facilities, environmental engineering, energy and utilities, and amphibious and expeditionary for construction; maintenance; and war-damage, and restoration of bases. ⚓

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If you would like to share your pollution prevention success stories, or would like additional information on the Navy's technology transfer program, contact Kurt Buehler.